

Fig. 1A

Example Direct Shipping Cost Database (cost per 5 lbs.)

		112a	112b	112c		112d
		Distribution Center ("DC") 1	DC 2	DC 3		DC N
111a	0-5 miles, courier	\$10.00	-	-	...	-
111b	0-150 miles, domestic ground	\$2.25	\$2.00	\$2.00		\$2.00
111c	150-1000 miles, domestic ground	\$3.00	\$2.50	\$2.50		\$3.00
111d	1000-2500 miles, domestic ground	\$4.00	\$3.50	\$3.50		\$4.50
111e	2500+ miles, domestic ground	\$5.00	\$4.50	\$4.50		\$6.00
111f	0-3000 miles, domestic next day air	\$8.50	\$8.50	\$8.50		\$8.00
111g	3000+ miles, domestic next day air	\$12.00	\$12.00	\$12.00		\$11.00
111h	0-3000 miles, foreign air	-	\$19.00	\$19.00		\$20.00
		⋮				

Fig. 1B

Example Direct Labor Cost Database

		116a	116b	116c		116d
		DC 1, Processing Lane 1	DC 1, Processing Lane 2	DC 2, Processing Lane 1		DC N, Processing Lane M
115a	Order Type 1	\$0.50	\$0.50	\$0.75	...	-
115b	Order Type 2	-	\$0.75	\$0.75		-
115c	Order Type 3	\$1.00	-	\$0.75		-
		⋮				
115d	Giftwrapping	-	\$2.00	-		\$2.00
		⋮				

Fig. 1C

Example Direct Packing Material Cost Database

		120a	120b		120c
		DC 1	DC 2		DC N
119a	Order Type 1	\$0.50	\$0.50	...	\$0.50
119b	Order Type 2	\$0.20	\$0.25		-
		⋮			

Fig. 1D

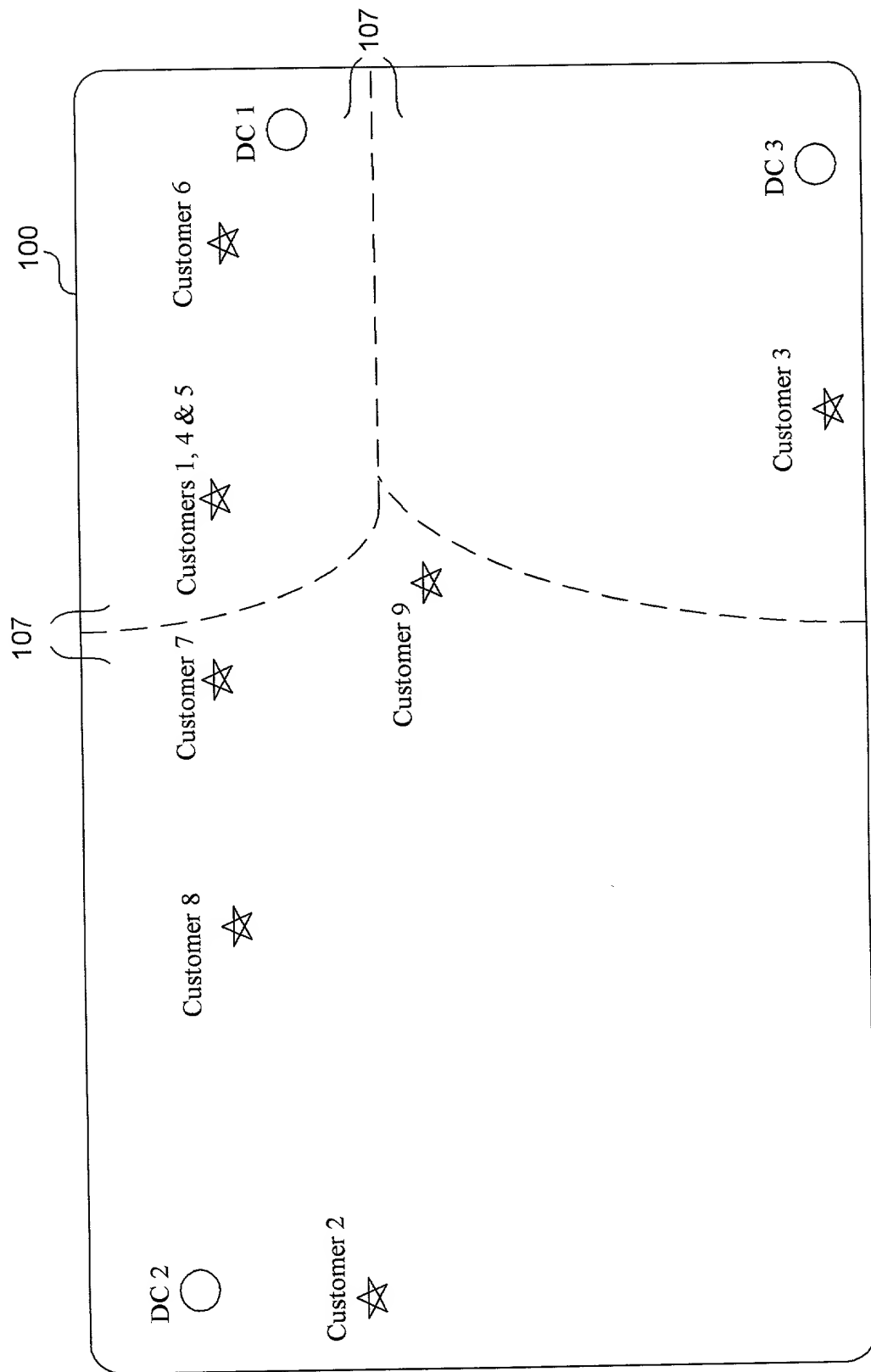


Fig. 1E

Example Estimated Customer Goodwill Cost From Expected Delivery Date Deviation Database

		124a	124b	124c	
		Customer 1	Customer 2	Customer 3	
		⋮			
123a	1 day early	\$-5.00	-	\$-1.00	...
123b	on-time	-	-	\$-0.50	
123c	1 day late	\$2.00	\$2.00	\$1.00	
123d	2 days late	\$5.00	\$2.50	\$1.00	
123e	3 days late	\$10.00	\$3.00	\$2.00	
123f	4 days late	\$25.00	\$5.00	\$1.75	
		⋮			

Fig. 1F

Example Estimated Customer Goodwill Cost From Expected Order Split Deviation Database

		128a	128b	128c	
		Customer 1	Customer 2	Customer 3	
		⋮			
127a	1 less order split	\$-2.50	-	\$-0.25	...
127b	expected # of order splits	-	-	\$-0.10	
127c	1 more order split	\$0.50	\$0.50	\$0.25	
127d	2 more order splits	\$1.25	\$0.65	\$0.25	
127e	3 more order splits	\$2.50	\$0.75	\$0.50	
127f	4 more order splits	\$6.25	\$1.25	\$0.40	
		⋮			

Fig. 1G

Example New Order Optimal Allocation Database

	132a	132b	132c		132d	
	DC 1, Processing Lane 1	DC 1, Processing Lane 2	DC 2, Processing Lane 1		DC N, Processing Lane M	
	⋮					
131a	7am-8am EST Order Type 1	25	15	60	...	-
131b	7am-8am EST Order Type 2	-	30	10		-
	⋮					
131c	8am-9am EST Order Type 1	25	25	50		-
131d	8am-9am EST Order Type 2	-	30	20		-
	⋮					

Fig. 1H

Example New Order Actual Allocation Differential

	<i>136a</i> DC 1, Processing Lane 1	<i>136b</i> DC 1, Processing Lane 2	<i>136c</i> DC 2, Processing Lane 1		<i>136d</i> DC N, Processing Lane M	
	⋮					
<i>135a</i>	7am-8am EST Order Type 1	-	+30	-5	...	-
<i>135b</i>	7am-8am EST Order Type 2	-	+5	-5		-
	⋮					

Fig. 1I

Example New Order Allocation Adjustment Formula

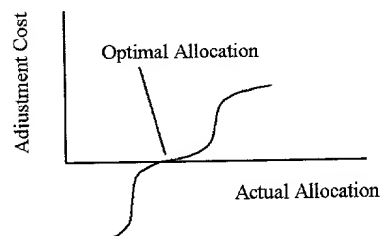


Fig. 1J

Fig. 1K

Fig. 1K

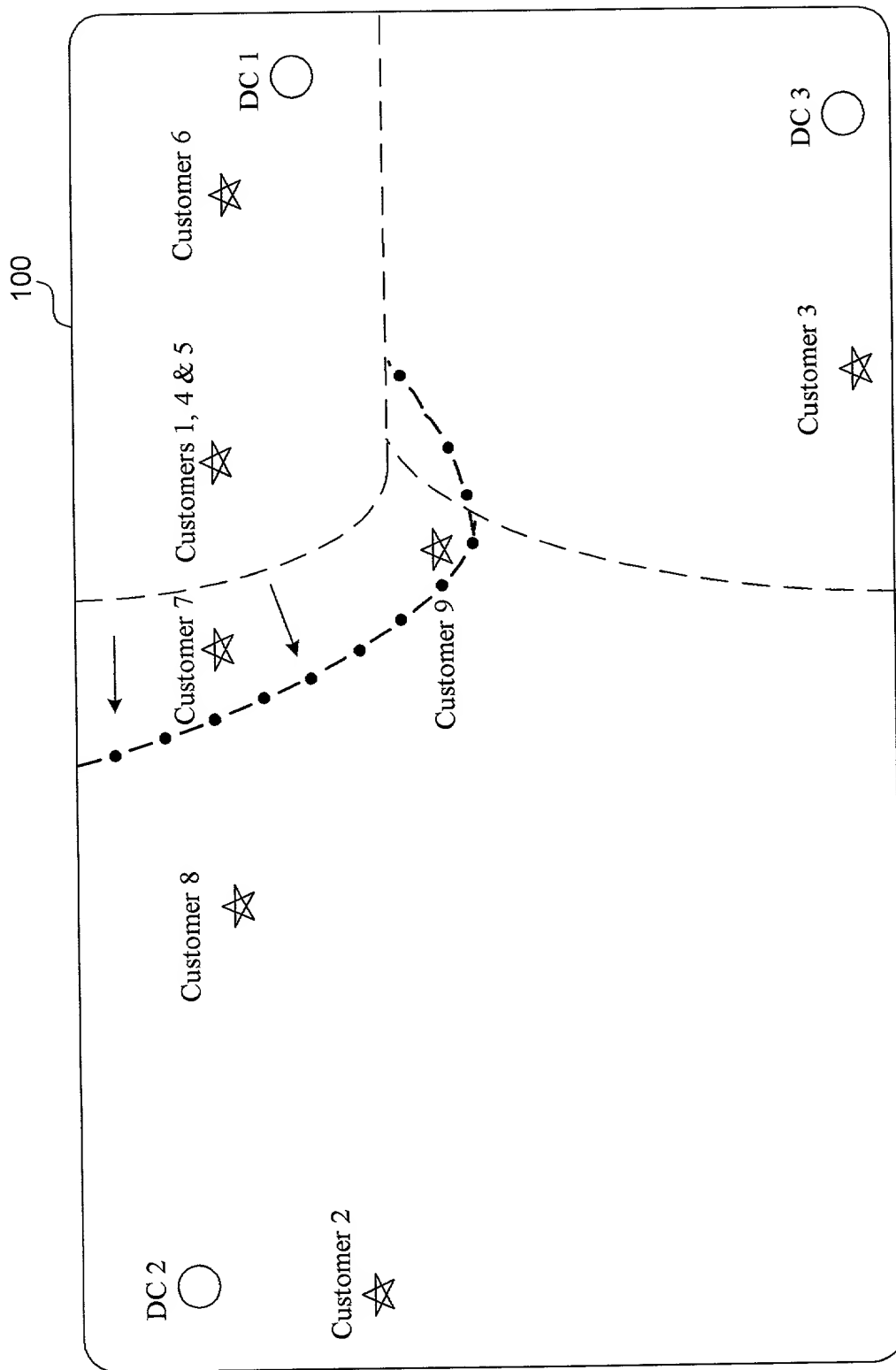


Fig. 1L

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Fig. 2A

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Fig. 2B



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Kenny Loggins Alive Kenny Loggins - DVD

\$21.49 - Quantity: 1 - Usually ships in 4 to 6 days

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Fig. 2C

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Order Total: \$27.19

When will your items arrive?

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Item 1 will arrive at the Seattle DC from external inventory storage by 5 p.m. on 09/02/xx, and will be behind approximately 100 orders in a queue of orders ready for processing by Processing Lane 3. Order processing will begin at approximately 8 a.m. on 09/03/xx and will be completed by 8:30 a.m. on 09/03/xx. The order will be shipped from the DC at approximately 10 a.m. on 09/03/xx by ABC Shipping.

Delivery Time: 09/08/xx

Shipping Address:	Change	Items Ordered	Price
Customer 1 Work 123 Main St. Seattle, WA 98101		1 of: Kenny Loggins Alive Kenny Loggins - Availability: 1 in stock - Gift-wrap and note: None Change	\$21.49

Shipping Method: [Change](#)
Standard Shipping

Shipping Option: One
shipment when complete
order is ready.

Item(s) Subtotal: \$21.49
Shipping & Handling: \$3.50

Total Before Tax: \$24.99
Estimated Tax: \$2.20

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Fig. 2D

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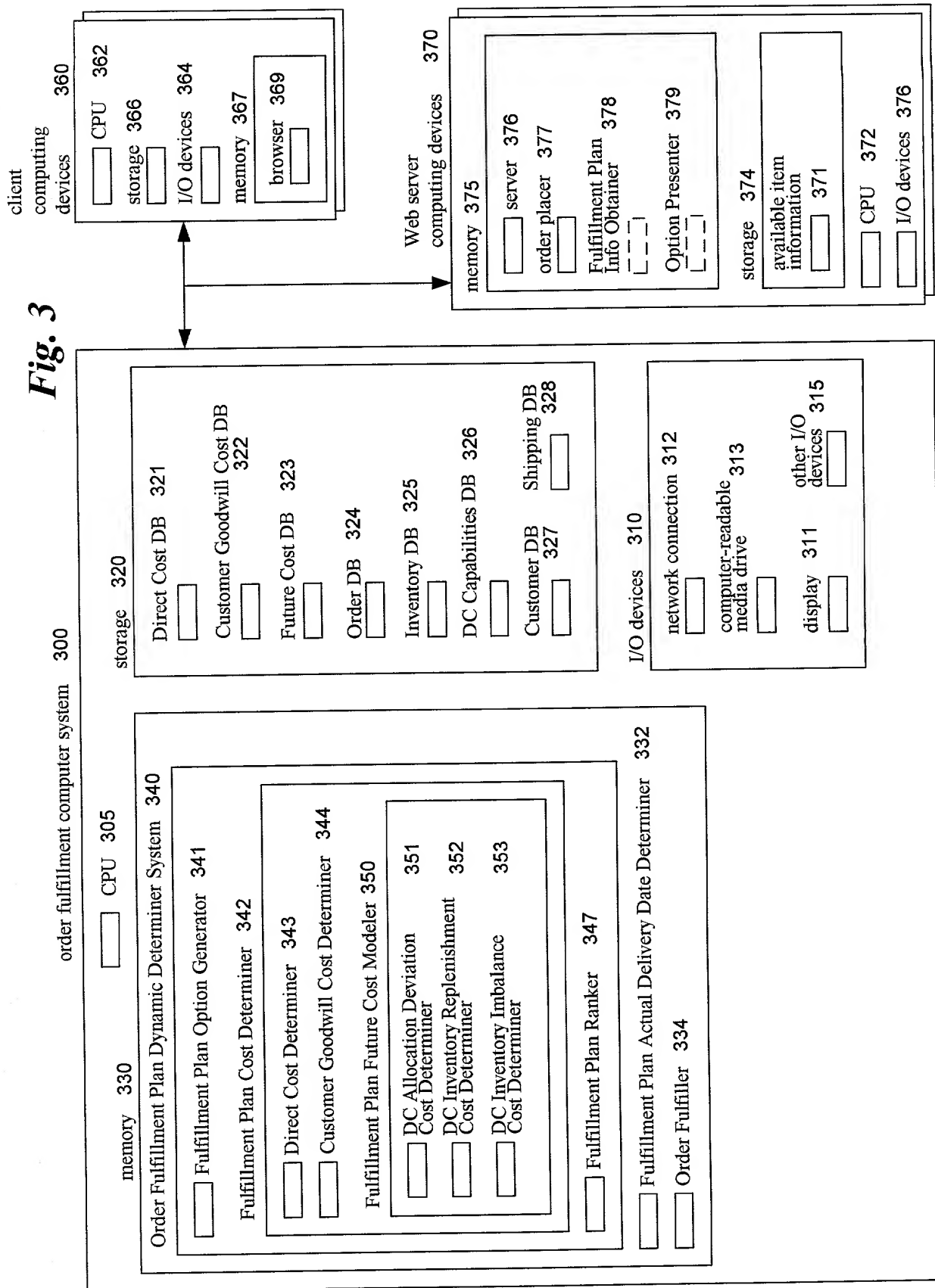
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Fig. 2E

Fig. 3



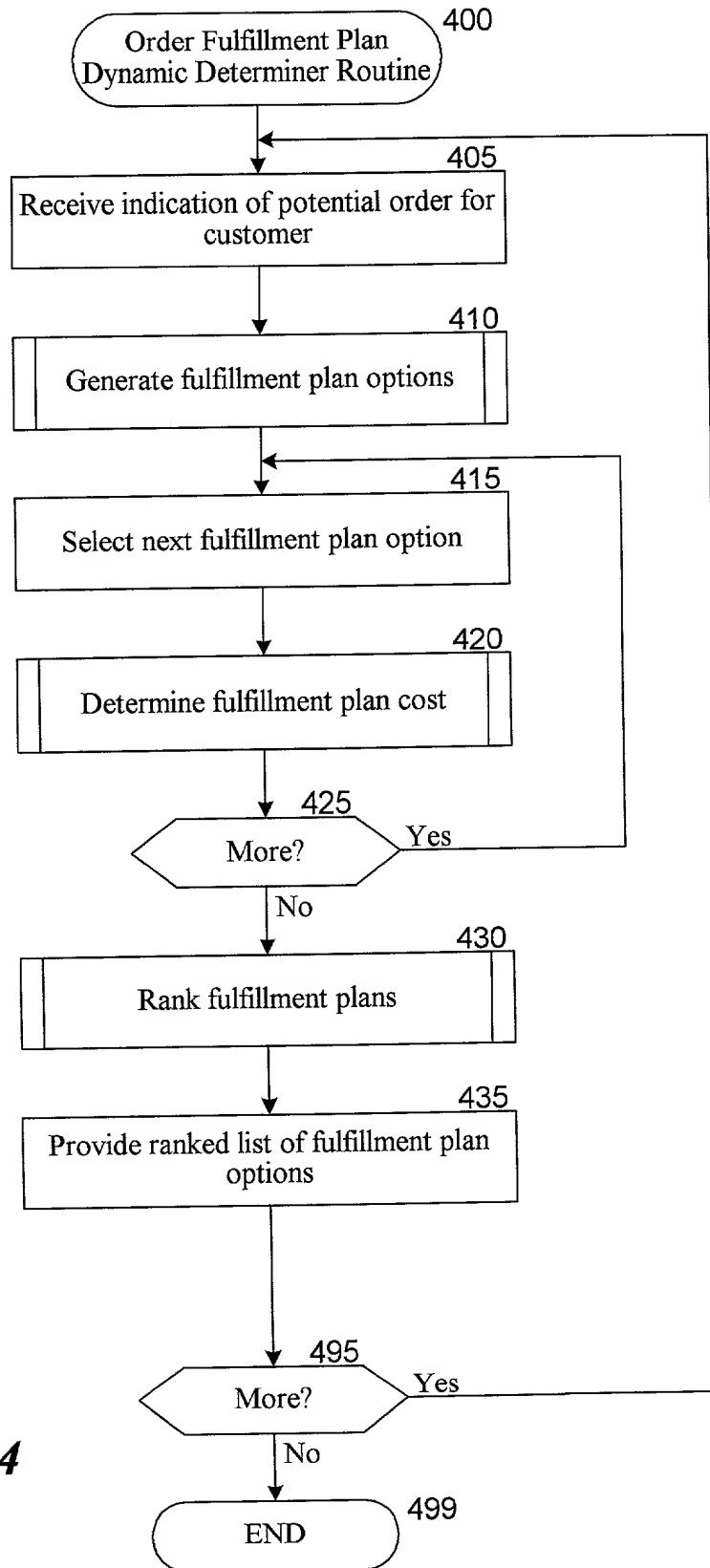


Fig. 4

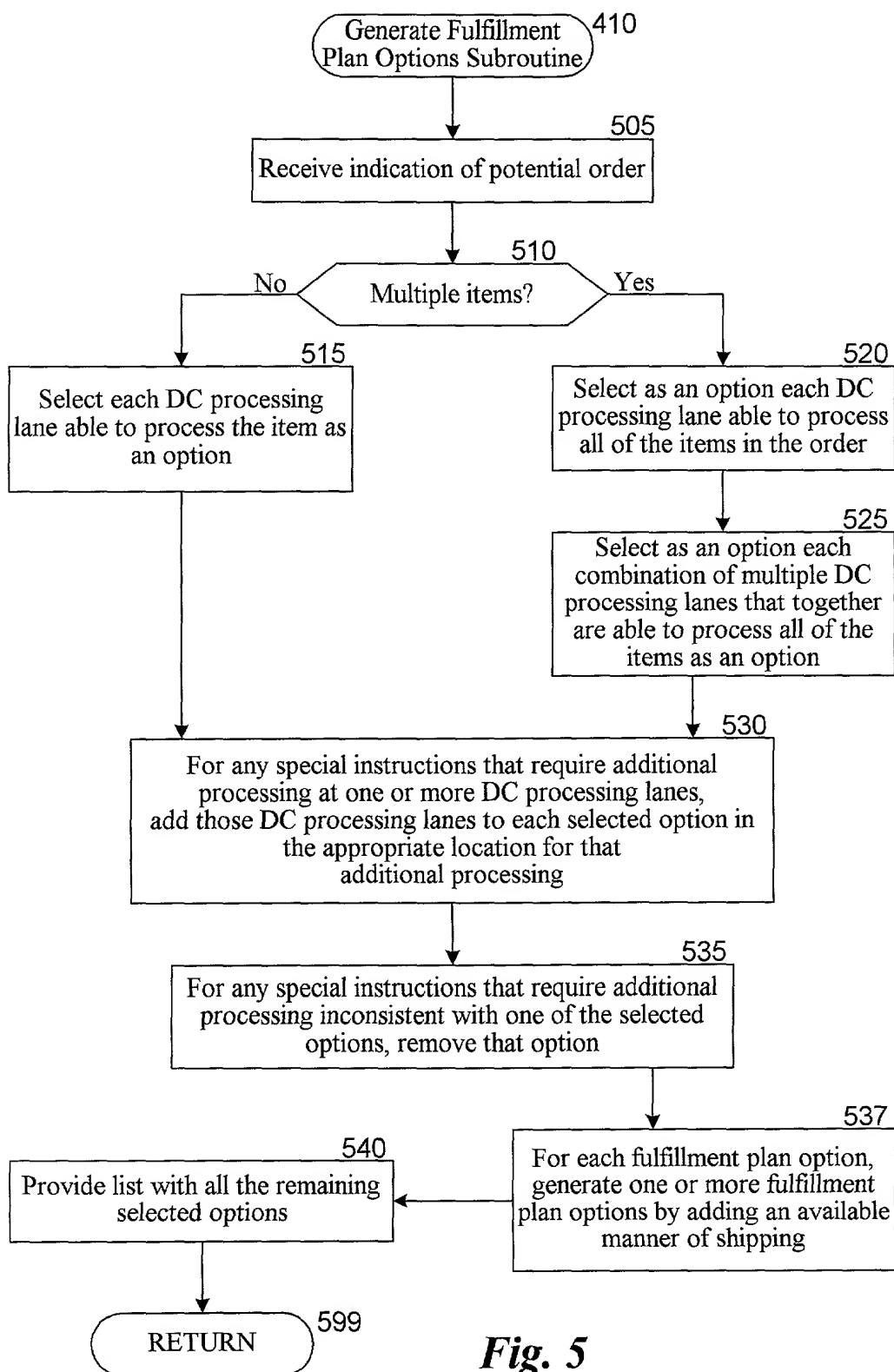


Fig. 5

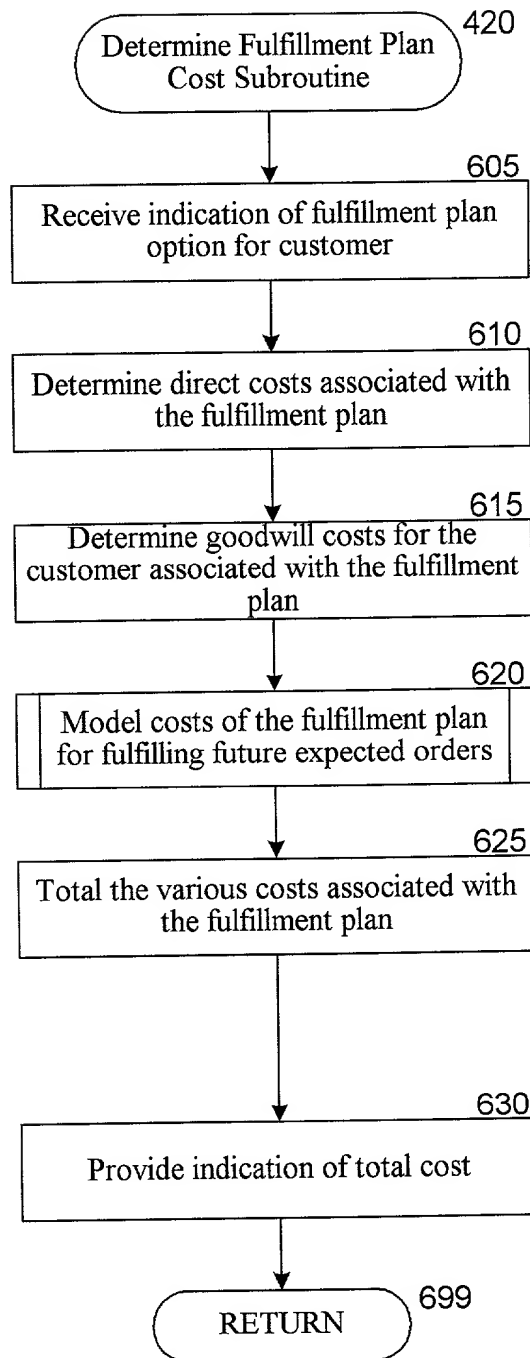


Fig. 6


```
graph TD
    620([Model Fulfillment Plan  
Future Costs Subroutine]) --> 705[Receive indication of fulfillment plan option  
for customer]
    705 --> 710[Assign cost to any additional deviation  
caused by fulfillment plan from optimal  
or expected allocation for processing  
lane(s) that will fulfill the plan]
    710 --> 715[Assign costs of any future inventory  
replenishments that will be incurred to  
fulfill future orders based on fulfilling  
this order]
    715 --> 720[Assign cost associated with any current  
imbalance in inventory of the ordered  
items among the DCs]
    720 --> 730[Total the costs assigned to the fulfillment  
plan to represent impact on fulfilling future  
orders]
    730 --> 735[Provide indication of totaled cost]
    735 --> 799([RETURN])
```

Fig. 7

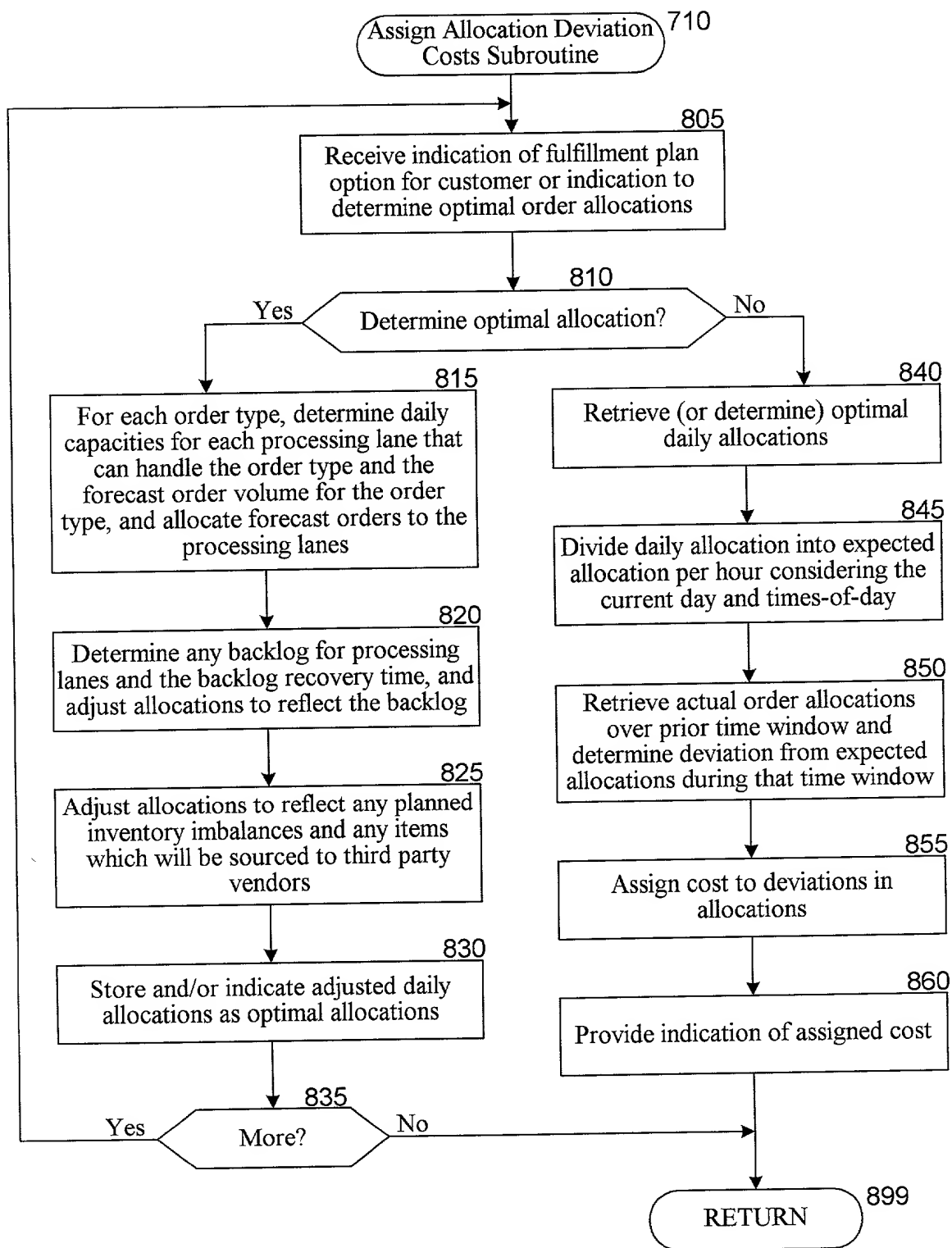


Fig. 8

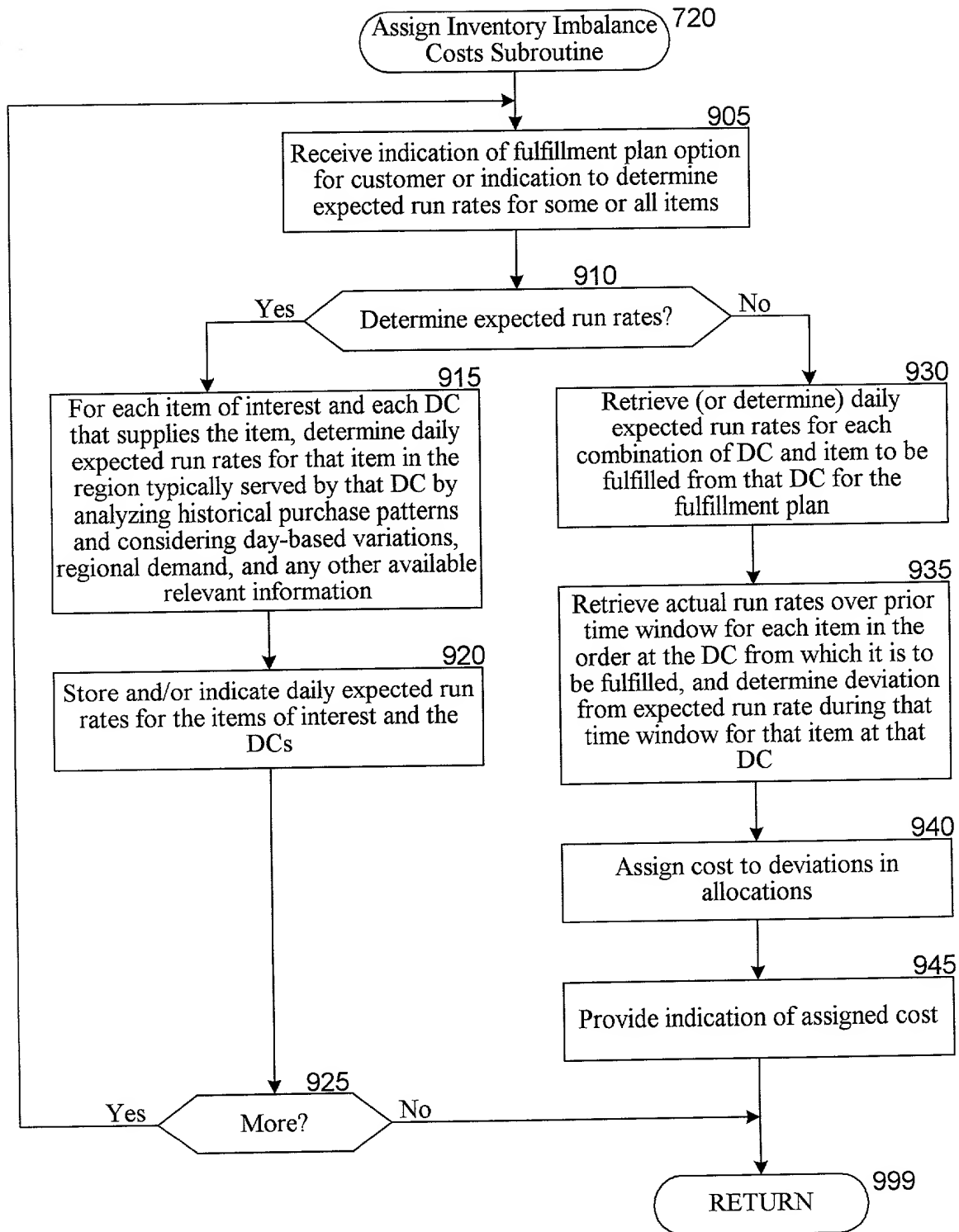


Fig. 9

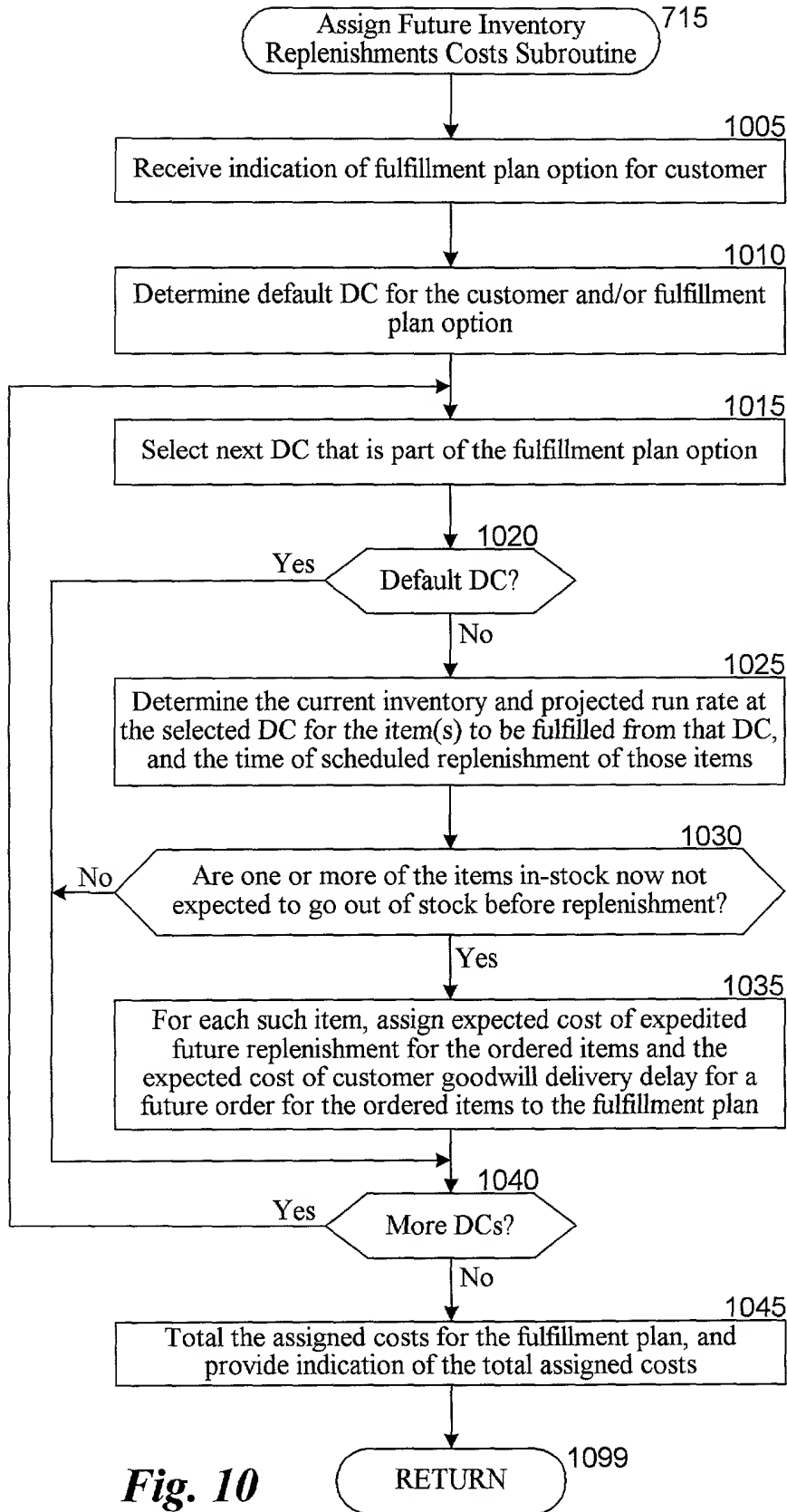


Fig. 10

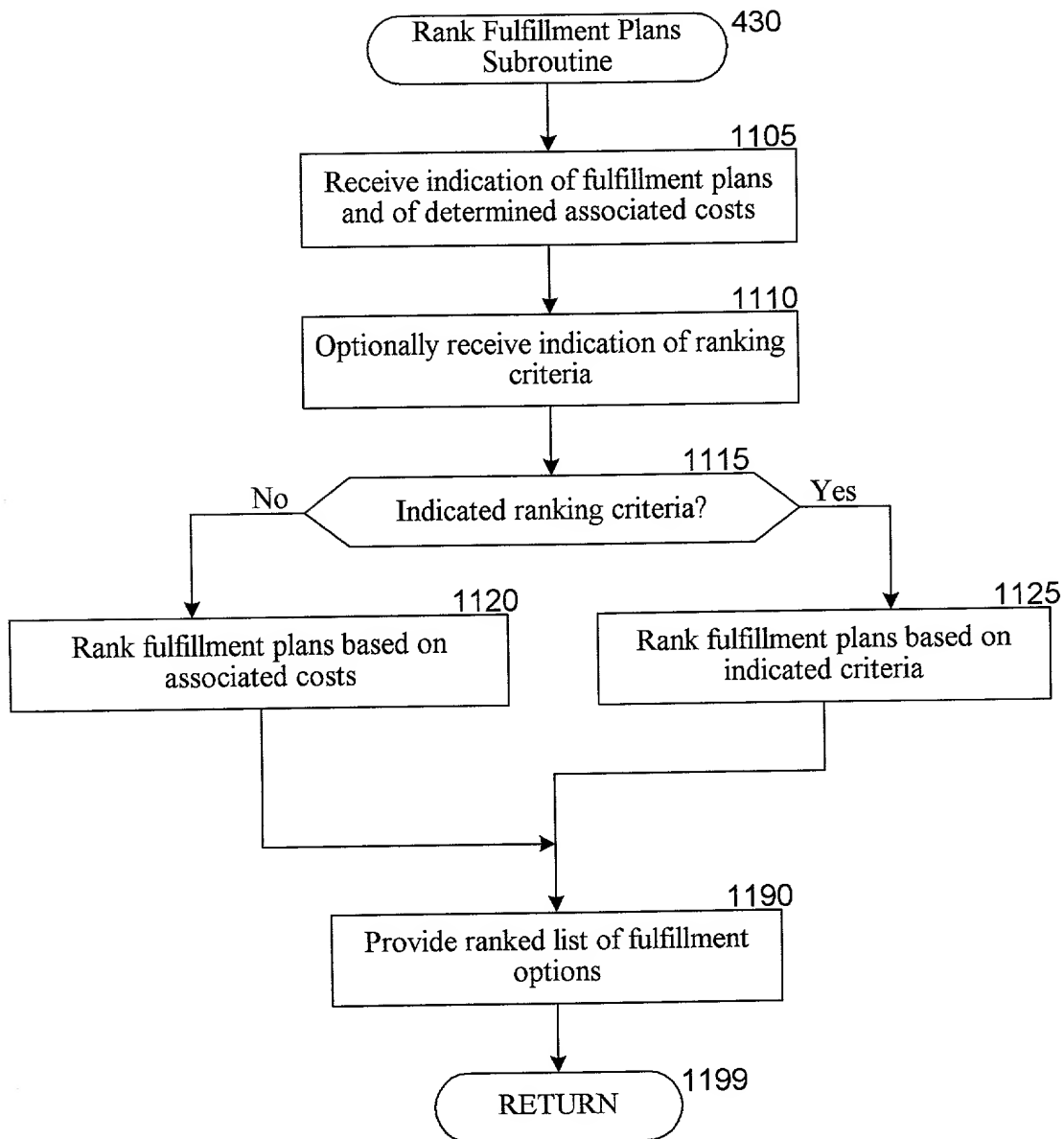


Fig. 11

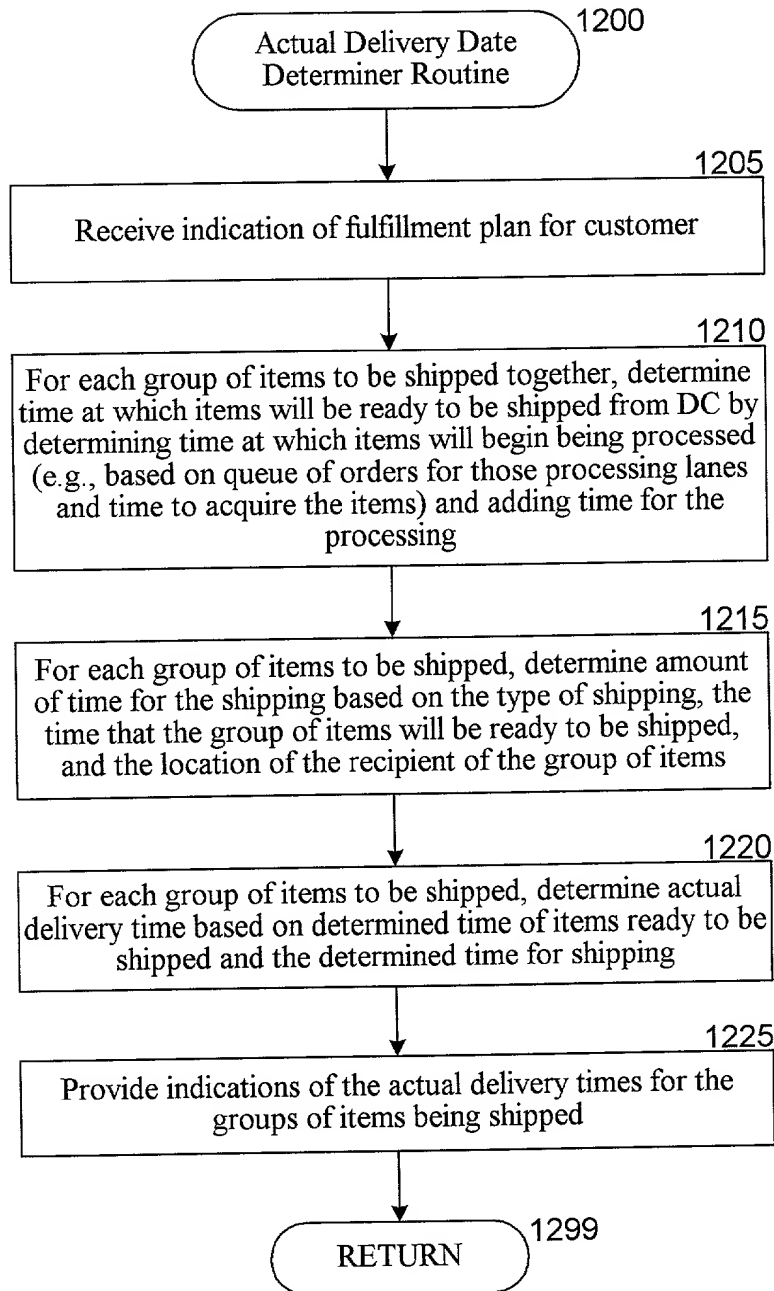


Fig. 12

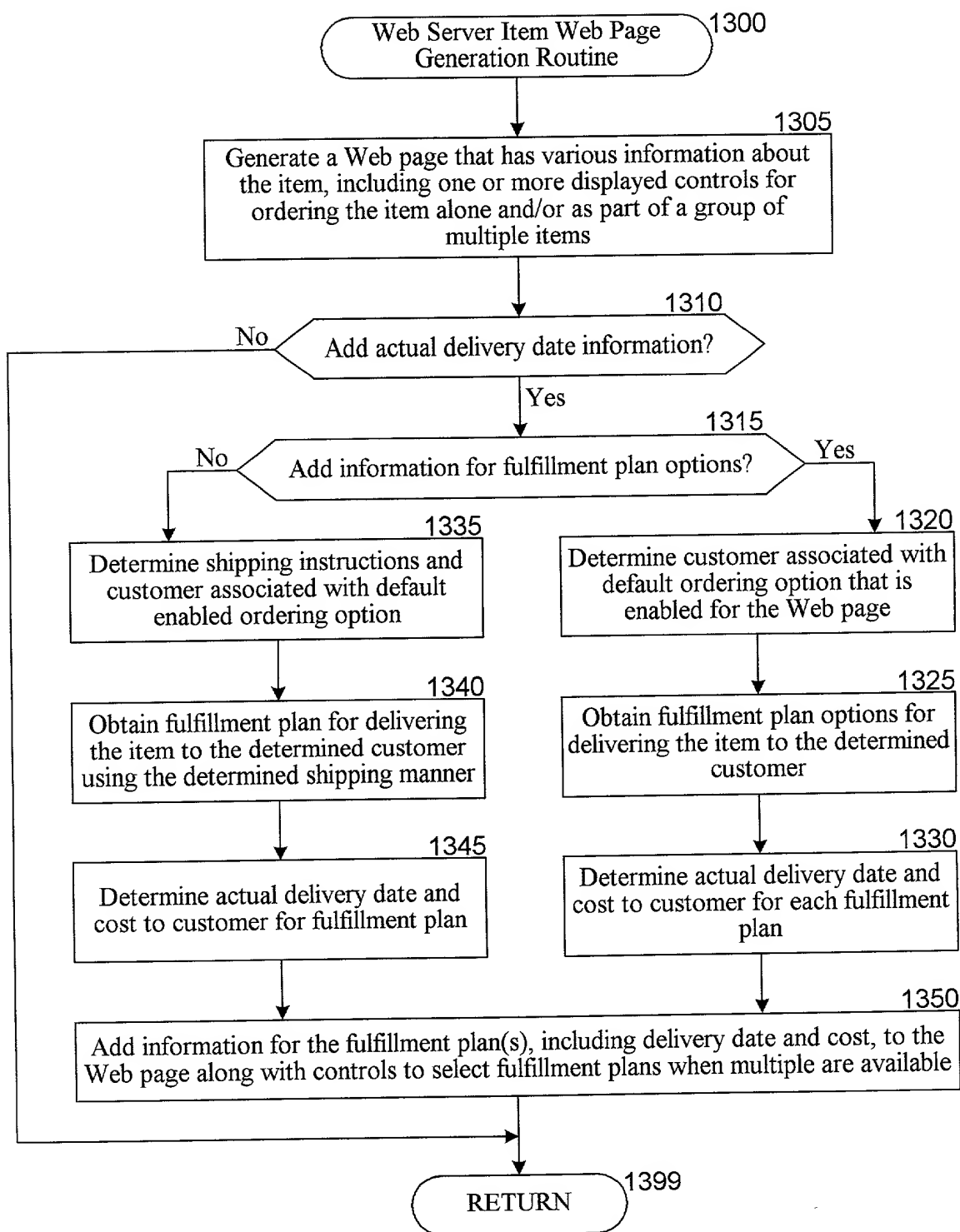


Fig. 13

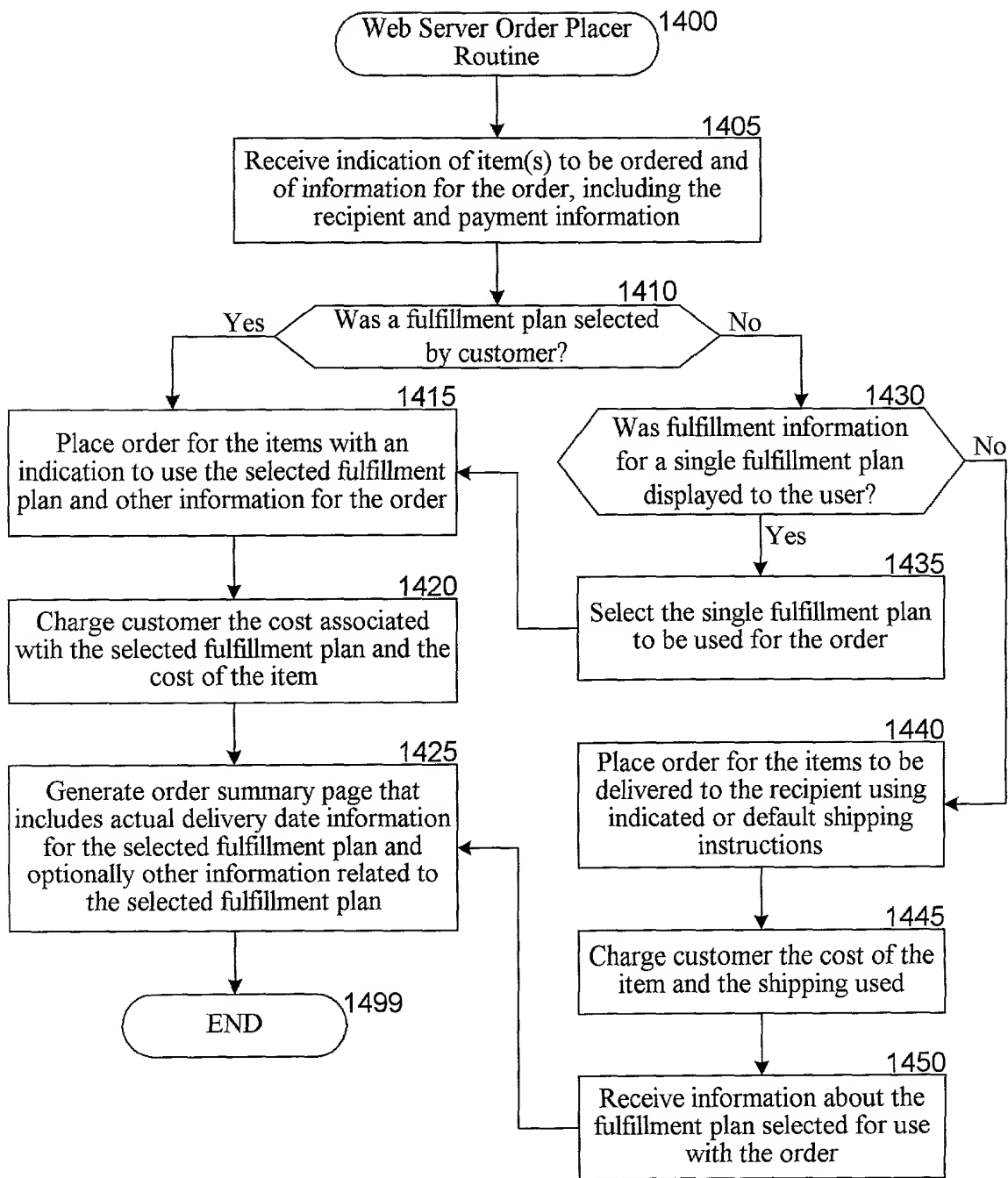


Fig. 14

1500



1505



1510



1515



1520



1599

Fig. 15

20000303T095650

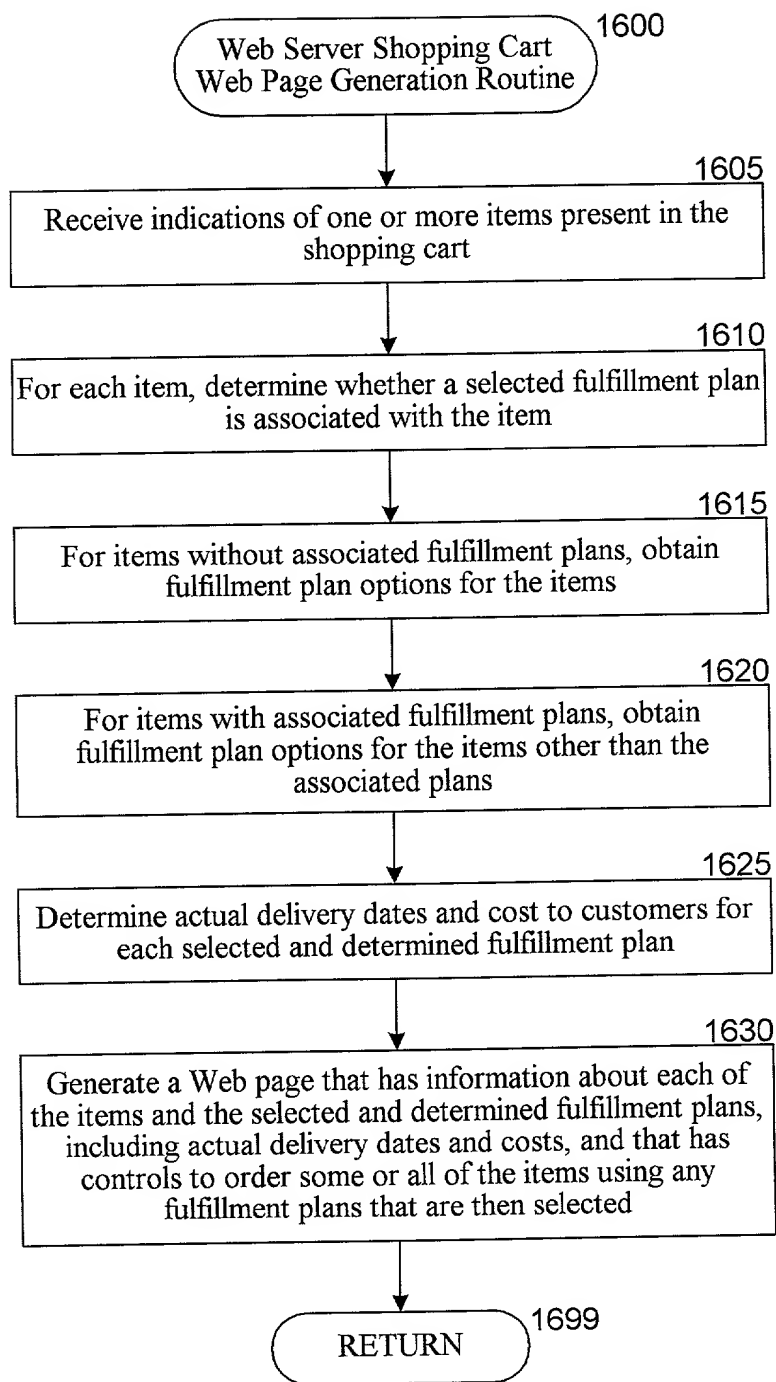


Fig. 16